

## PHOSPHOLIPASES A<sub>2</sub> FROM *Micrurus frontalis* VENOM

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The most representative elapid in the Americas is the coral snake that belongs to the *Micrurus* genus, and for which there are few biochemical information on their venom composition. The present study reports the identification of two novel phospholipases A<sub>2</sub> (PLA<sub>2</sub>) amino acid sequences in the venom of the Brazilian coral snake *Micrurus frontalis*. Multi-steps of reverse phase HPLC were used to isolate the two PLA<sub>2</sub>s. The molecular masses and partial primary structures of the proteins were obtained after reduction, alkylation and digestion with immobilized trypsin by MS and MS/MS experiments carried out on a MALDI-TOF/TOF. Peptide sequence alignment and sequence similarity analyses were performed using FASTA. The native PLA<sub>2</sub>s molecular masses are 13305 and 13586 Da and *De Novo* sequenced fragments shared high sequence similarity scores with PLA<sub>2</sub> from *Naja mossambica* and *Micrurus nigrocinctus* venoms. In *M. frontalis* venom only one PLA<sub>2</sub> (hemorrhagic PLA<sub>2</sub>) was described to date and had no significant similarity to the proteins described in the present study. Snake venoms PLA<sub>2</sub>s exhibit a wide variety of pharmacological effects by interfering in normal physiological process. These proteins could play a role in the coral snake envenomation.

Keywords: *Micrurus frontalis*, phospholipase A<sub>2</sub>, *De novo* sequencing

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